

The Gender and Reproductive Health Research Initiative
Mapping a Decade of Reproductive Health Research in India

Studies on Women's Morbidity in India

A Critical Review of Selected Studies (1990-2000)

*Meena Gopal
Lakshmi Lingam*

A CREA Publication

Creating Resources for Empowerment in Action (CREA), aims at enhancing the capacities of a new generation of women leaders using a human rights approach. The organisation works on issues of sexuality, reproductive health, violence against women, gender equity, economic justice and women's rights.

The Gender and Reproductive Health Research Initiative has been supported by The Ford Foundation. Support for printing, publishing and dissemination has been provided by The Rockefeller Foundation.

Copyright©:
Belongs to authors

Suggested Citation:
Gopal, M., L. Lingam. Women's Morbidity in India: A Critical Review of Studies (1990-2000). The Gender and Reproductive Health Research Initiative. CREA. New Delhi. 2002.

The authors of this paper would like to acknowledge the comments received from Dr. Sally Ann Bisch, Dr. Mariana Romero and Dr. Sundari Ravindran for their valuable comments on this review. Special thanks to Ford Foundation for initiating this review and actively supporting it.

Published and disseminated by:
Creating Resources for Empowerment in Action (CREA)
2/14, Shantiniketan, Second Floor, New Delhi 110021
Phone: 91-11-4107983, 91-11-6874733 Telefax: 91-11-6883209,
Email: crea@vsnl.net Web: www.crea.org.in

Community Health Cell
Library and Information Centre
367, " Srinivasa Nilaya "
Jakkasandra 1st Main,
1st Block, Koramangala,
BANGALORE - 560 034.
Phone : 5531518 / 5525372
e-mail:sochara@vsnl.com

**The Gender and Reproductive Health Research Initiative
Mapping a Decade of Reproductive Health Research in India**

**Studies on Women's
Morbidity in India**

**A Critical Review of
Selected Studies (1990-2000)**

*Meena Gopal
Lakshmi Lingam*

CONTENTS

Introduction	1
Communicable Diseases	2
Non-Communicable Diseases	4
Epistemological Issues	10
Conclusion	12
References	14

MISSING LINKS IN MORBIDITY STUDIES: A GENDER ANALYSIS

INTRODUCTION

Research on health and illness is an intersecting point for range of disciplines - medicine, epidemiology, economics, sociology, anthropology and psychology. The objectives of research, the research questions addressed, the selection of research methods and more importantly the conceptual and theoretical frameworks adopted varies in medical and epidemiological research on the one hand, and social science disciplines, on the other. Health research has been dominated by bio-medical/mechanical approach that views illness and disease in isolation of the social context. On the other hand, the social sciences research on health, remained within the confines of 'social engineering', with the preoccupation to input research findings to improve people's health seeking behaviour; or change beliefs and practices that are seen as detrimental to good health and so on. The limitations of overemphasising behavioural aspects, to the neglect of structural, economic and political aspects had become evident in the 1980s. The emergence of several people's struggles, health campaigns and the second wave women's movement has brought into focus issues of equity, equality, rights and justice, as inextricably linked to people's health and well being. The realm of research has also been subjected to critical scrutiny.

The inclusion of gender perspective holds a lot of promise to the understanding of health situation of people in general and women's health in particular. When considering the differences between women and men, there is a tendency to emphasise biological or sex differences as explanatory factors of well being and illness. A gender analysis in health, while not excluding biological factors, considers the critical role that social and cultural factors and power relations between women and men have in promoting and protecting or impeding health. The purpose of a gender analysis is, to identify, analyse and act upon inequalities that arise from belonging to one sex or the other, or from the unequal power relations between the sexes. These inequalities can create, maintain or exacerbate exposure to risk factors that endanger health. They can also affect the access to and control of resources, including decision-making and education, which protect and promote health. Since these inequalities most often disadvantage women, a gender analysis has been used generally to explain and address women's health problems (Technical Paper on Gender and Health available on WHO website).

Women's sense of well-being, the silent morbidity load that they carry and the lack of access to health goods and services, are increasingly being revealed by gender sensitive research studies. However, much of this research is limited to the realm of reproductive health research. Morbidity and health studies in areas such as communicable and non communicable diseases where reproductive health may or may not intersect, has barely been traversed by gender sensitive researchers. The present review attempts to closely examine selected existing research in communicable and non-communicable diseases from a gender analysis framework. The objective of the review was to identify gaps in research, which could enrich and also unravel the puzzle about gender differentials in prevalence rates and gender specific impacts of diseases. This review is based on an annotated bibliography of select studies looking at aspects of women's morbidity in India, between the years 1990-99 (Gopal, 2000) as well as certain recent publications. This review is organised in three sections. The first section covers Communicable Diseases. The second covers Non-Communicable Diseases and the final section highlights epistemological concerns that emerge from the body of knowledge.

I. COMMUNICABLE DISEASES

Recent reports such as the VHAI/WHD on 'Women, Health and Development' (Gopalan & Shiva, 2000) and that of the WHO on 'Women of South-East Asia - A Health Profile' (2000) state that deaths and morbidity due to communicable and non communicable diseases co-exist in the five countries viz., India, Bangladesh, Myanmar, Indonesia and Thailand, placing a double burden on the health care system. The WHO (2000) report states that "Communicable diseases remain the leading cause of death world-wide, killing at least 17 million people annually. The South-East Asia region accounts for 41% of these deaths - almost 7 million deaths each year" (WHO, 2000: 37). The report also observes that sex specific data on the incidence and prevalence is limited and also literature examining the influence of gender on risk of infection, prevalence and access to treatment is scanty.

This review of existing research is based on select hospital and community based studies of communicable diseases such as tuberculosis, malaria, filariasis, and leprosy, to critically assess and understand gender specific impacts.

Tuberculosis

Tuberculosis is reported to be the single leading cause of death by infection worldwide of women in their reproductive ages, killing over one million women every year. It is observed that, prevalence rates for men are higher compared to women in countries of Europe and America, where overall risk of tuberculosis infection has declined. The lower prevalence rates for women in South East Asian region, is attributed to under notification of infected women (WHO, 2000).

A research paper by Nair et al (1997) explores the health seeking behaviour of poor male and female tuberculosis patients in Mumbai, and examines their perceptions of the causes and effects of the disease on their personal lives. This is an example of the use of a gender perspective to understand what could have contributed to differentials in perception of disease, access to services and barriers to access. Men worried about loss of wages, financial difficulties, reduced capacity for work, poor job performance, and the consequences of long absence from work. Women were concerned about rejection by husband, harassment by in-laws, and the reduced chances of marriage (for single women), in addition to their concerns about dismissal from work. During the first two months of symptoms most patients either did nothing or resorted to home remedies. When symptoms continued, private practitioners were the first source of allopathic treatment; they were generally unable to correctly diagnose the disease. Respondents shifted to municipal and NGO health services when private treatment became unaffordable. Married men and single women perceived a greater level of family support to initiate and complete treatment. Married women tried, often unsuccessfully, to hide their disease condition for fear of desertion, rejection or blame for contracting the disease. Women dropped out from treatment because of the pressure of housework, and the strain of keeping their condition secret particularly when the reasons for their movements outside the home were routinely questioned. The study brings to the fore the gender differentials in terms of family support, access to health care, and decline in status that women face when contracted with stigmatising diseases.

A couple of hospital-based studies (Mukherji et al, 1991; Tripathy et al, 1991) have tried to establish the association between endometrial TB and pulmonary TB in patients, to increased afflictions of the genital tract and menstrual abnormalities. The cases of endometrial TB among the hospital based samples ranged from 2% to 24% (Mukherji et al, 1991; Tripathy et al, 1991; Misra et al, 1996; Reddy et al, 1994). Stress was laid on detection of the disease and its follow-up due to the high prevalence of tuberculosis

and the asymptomatic nature of genital tuberculosis. Infertility also emerges as a major associated factor. All the genital affection studies reviewed here focussed only on women, however, there was no attempt to associate social and structural differentials determining health with the disease affliction.

The strength of community based studies in understanding the social determinants of illness and treatment seeking is not found in hospital based studies. Though one study (Misra et al, 1996) does categorise the patients according to socio-economic and marital status but the categorisation is not made use of in the analysis. The reference to the afflicted women's poor socio-economic status and unhygienic living conditions comes as an afterthought in the course of the discussion, as an associative factor for genital tuberculosis even though there is a declining trend in its incidence in recent years.

Malaria

The number of reported cases of malaria is on the increase in India. Evidence indicates that the prevalence rates are higher for males compared to females. Women are at a higher risk of infection during pregnancy. The implications on pregnancy and pregnancy outcomes are also severe. The malaria in pregnancy studies reviewed here (Singh et al, 1995; Nair et al, 1993; Maitra et al, 1993; Chodankar et al, 1995) reveal that prevalence rates ranged from 17% to 57% with primigravidae (women in first pregnancy) having greater susceptibility, and prevalence greater in all during second trimester. One of the hospital studies (Chodankar et al, 1995), in Mumbai, observes that a majority of pregnant women, among men and women who had presented themselves to the hospital with malaria, died of cerebral malaria. The authors further observe that men who were affected by malaria were chronic alcoholics, smokers, brown sugar addicts, and with poor nutrition. There was no such assessment of women's socio-economic background. This information seems to be much more of a descriptor of poverty rather than a contributing factor to incidence of malaria. Despite this, the conclusions point to the need for parasitic count and anti-malaria treatment, and detection of drug resistance, as a preventive measure. In one study (Nair et al, 1993) there is a mention of anaemia, intercurrent infection (intervening factor pertaining to a disease attacking a patient with another malady), and other nutritional deficiencies being generally prevalent among women in that place. However, the occurrence of malaria, especially falciparum, inducing complications in pregnancy is discussed to suggest preventive measures such as recommending women not to travel to highly endemic areas. While drugs are prescribed, avoiding travel is recommended. Thus the entire range of determinants is not considered in suggesting preventive measures.

Filariasis

Lymphatic filariasis is an important public health and socio-economic problem affecting over 120 million people world-wide. Forty percent of these cases are from India where 420 million population are at risk of the disease. The extent of suffering that women experience is an area that is hardly researched (UNDP et al, 2001).

The studies (Bandhopadhyay, 1996; Rajarathnam et al, 1993) reviewed here on lymphatic filariasis examine the multi-faceted problems encountered by women from this extremely stigmatising and burdensome disease and estimate the prevalence of the disease, age of onset, duration, and difference in manifestation. Bandhopadhyay's (1996) study on lymphatic filariasis is one of the few studies among all those under review to have adopted a gender sensitive approach. The study looks at impact on women's lives as a result of suffering from filariasis especially their perceptions of the disease, their

social and economic roles and their relationships with others from a gender sensitive perspective. Informal interviews, questionnaires in local languages, with women and children affected by the disease, not only in clinics, but schools and homes was adapted to elicit data. Both acute and chronic manifestations of the disease made women unable to do household and outside work, and caused economic losses. Women tend to blame themselves and family members too reacted negatively to their illness. Following an outward manifestation of the disease, they feared rejection by husbands and families. Attendance at clinics in case of women was only 30% and adolescent girls formed 20% of the total attendance compared to men and boys. When male patients were asked about female members of their families having the disease, they mentioned their mothers, sisters, and daughters, but felt less comfortable about giving information about their wives. A majority of women who had nodules in their breasts and genitalia had never visited health centres due to embarrassment and fear of being examined by male health personnel. The study urges for more research into how women cope with disease and disabilities, which can help in formulating gender sensitive intervention programmes for women.

Leprosy

India contributes 55% of the global burden and 87% of the regional burden of leprosy. As in the case of malaria and TB higher prevalence rates are observed for males compared to females. The studies on leprosy, another dreaded and stigmatising disease (Vlassoff et al, 1996; Rao et al 1996) too looked at gender differences, to examined how status differences between men and women contribute to differences in treatment by family, resulting in greater suffering for women. Greater proportion of women (63% to 26%) suffered the burdens such as fear, isolation, rejection, and blame, compared to 49% to 21% of men, respectively. One study (Vlassoff et al, 1996) in particular looked at the family and spouse's reaction to the disease and the impact on marriage for men and women. Women faced more negative reactions from their spouses and families than males. Many of the afflicted left home or were sent away by a process termed 'dehabilitation'. Women said they were restrained from household activities and touching children and hence decided to leave. 49% males and 63% females said it was fear of deformity that forced them to leave. Girls with leprosy found it difficult to marry than boys and had to make more compromises than boys. Among patients those who reported married were not necessarily with their original spouses. In the leprosy colonies more men were married to non-leprosy affected women than vice-versa. In another study (Rao et al 1996) women, despite having knowledge on causation of disease still delayed seeking treatment, and greater number of women than men tended to hide the disease due to fear of social stigma and dehabilitation. While interesting information was elicited in the course of the studies on differentials in experience of disease, the suggestions for control focus on simplified drug procedures and gender sensitisation of leprosy workers.

II. NON-COMMUNICABLE DISEASES

India and the countries in the region are faced with the challenge of managing the increasing burden of communicable and non-communicable diseases. WHO (1999) report observes that non-communicable diseases account for an estimated 39% of all disability-adjusted life years (DALYs) in low and middle-income countries. Among the non-communicable diseases, diseases of the heart and circulation are biggest risks to life. The most important circulatory diseases include hypertension, CHD,

cerebrovascular disease and diseases affecting the heart muscle. The burden of non-communicable disease is expected to increase in developing countries driven by change in life styles. In countries like India, the public health system has to cope with a large burden of communicable diseases, growing rates of non-communicable diseases and the resurgence of certain communicable diseases. Studies of Coronary Heart disease (CHD), hypertension and diabetes mellitus, osteoporosis, cancers and mental health are reviewed here.

Coronary Heart Disease (CHD)

Medical professionals and people often regard CHD, as a man's disease. The risk factors for CHD are the same for men and women. A recent WHO report (1997) examined if women are neglected victims of heart disease (cited in WHO, 2000), due to the prevalent biases. The epidemiological studies on CHD prevalence have shown that the rates vary from study to study with consistent gender differences. Most of the studies have statistically reiterated the observations that hypertension, high blood cholesterol, obesity and a positive family history, as high risk factors for CHD. Further, smoking, sedentary lifestyle, high fat foods in conjunction with genetic/biological predisposition increase the risk of CHD. The prevalence rates, therefore, are found to be higher among professionals and among literates compared to working class and illiterates. (Gopinath, et.al., 1995; Singh, RB, et.al., 1998; Ramankutty, et.al., 1993).

In order to assess if CHD is on the raise, Bhatia (1995) reviews and compares population based epidemiological surveys on aspects such as prevalence rates and associated risk factors. The author observes that inadequate sample size, varying methodology and lack of standardised diagnostic criteria, render comparisons and estimates difficult. The paper points out that the overall prevalence rates for CHD varied from 74 to 96.7 per 1000 population with higher prevalence rates for males compared to females. However, the rates for males and females vary on the basis of the tools used for measurement. It is apparent that research designs and tools of measurement contribute to these variations. A population based rural prevalence survey conducted in Kerala by Ramankutty, et.al., (1993) had observed lower CHD rates by administering objective measurement criteria and a higher CHD rate with a questionnaire. A higher prevalence of angina among females when compared to males in the 25-54 years age group was observed when a locally adopted Rose Questionnaire was used. However, the researchers mention that women's sensitivity to health problems in this state, which has a high female literacy, could be a contributing factor to this finding. Attempts at validating people's perceptions on illnesses and wellbeing in comparison to 'quantitative', 'scientific' lab instrumentation always throws dilemmas. In many of these studies the 'scientific' takes the privileged position as the golden standard, thus discounting people's perceptions and reporting.

Goyal, Shah and Advani(1991) studied 5000 patients admitted over a period of one year in a public hospital in Mumbai for myro-cordial infarction. The patients 84% males and 16% females belonged to lower SES (monthly income approx. Rs. 750/-). The study observed mortality among young females (<40 years) 4 times greater than that of young males and 3 times lesser than that of older males (>40 years). However, the study does not provide any explanation for this variation. Nevertheless, the researchers conclude that 'infarction in young age is predominantly a male disease' (p.14). Apart from an obviously contradicting conclusion, the paper is oblivious to gender-specific variations in access to health services. In the Indian context, a hospital based study is more likely to have more males in the study population because men access services more than women contrary to the belief that CHD is more common in males. A community based study by Gopinath, et, al (1992) among asymptomatic CHD urban population (13,723 persons) had observed higher prevalence among female subjects (76/1000)

compared to males (56/1000). The researchers observed that except for obesity among the female subjects, there were no significant differences in risk factor between the two sexes.

Association of CHD to socio economic status has been explored by most of the researchers. The community based study by Wander et.al., (1994) in rural Punjab, observed that skilled workers had a higher prevalence of CHD compared to small time businessman and housewives. Labourers had the lowest prevalence. This according to these researchers is contrary to the findings in developed countries where CHD is higher among lower SES groups. The study by Stein et al, (1996) observed that, 9% of men and 11% of women who had low birth weights, short birth lengths, or small head circumferences at birth, had developed CHD in adulthood. The study supported the significance of addressing women's health and nutritional issues from infancy. This reiterates the feminist concern of addressing women's health from childhood since it has an intergenerational impact. A study (Muralidhar, 1991) that examined secondary sources to ascertain major causes of death in 1984 in Greater Bombay, observed that heart disease was a leading cause of death for both sexes contributing to 17% of total deaths for males and 15% for females. It was followed by tuberculosis (14%), pneumonia (9%) in males and just in the reverse order in females.

Gupta & Gupta (1996), subjected 14 studies carried out during the period 1960 to 1965 to a meta analysis. Many studies did not report sex specific prevalence rates. The analysis indicates significant increase in the overall prevalence rates - nine fold in urban areas and two fold in rural areas. The increase is steep in the younger age groups (20 - 39 years) and in urban men and women, and rural men. This pattern has been pointed to be associated with increases in prevalence of hypertension.

As a matter of practice most of the studies attribute smoking as a risk factor to men and sedentary life style along with overweight as risk factors to women. These seem to be gender stereotyped generalisations, which assume that women are 'housewives', non-workers, hence engage in light physical activity and are obese. All community studies barring Wander et.al., (1994) and Raman Kutty, et.al., (1993) record overall prevalence rates higher for males compared to females. Silent CHD was found to be higher in females than in males (Gopinath et.al., 1995). A community based study among rural men and women in Nellore District, Andhra Pradesh, had observed lower CHD risk level among women in the younger ages compared to men but this advantage is reversed among post-menopausal women. There is also a steep decline in the men/women ratio in the prevalence of CHD risk factors in the older ages (Bulliyya, 2001).

There is considerable research that provider pointers to socio-economic issues and gender issues in CHD, but answers to crucial questions are not available.

Hypertension and Blood Pressure

Hypertension confers a four-fold risk of CAD in women versus a three-fold risk in men. It is more common among women after 45 years of age. The systolic blood pressure (BP) continues to increase disproportionately in women until the age of 80, according to Enas et.al., (2001). A community based study from rural Maharashtra by Jajoo et.al.,(1993), had observed that the prevalence of hypertension is higher among women. The study further noted, that the prevalence is higher among 'not so poor'; among individuals with moderate and light physical activity; and among smokers and obese individuals. On the other hand, a community based study from rural Tamil Nadu, by Gilberts, et.al.,(1994), observed a higher mean BP for men compared to women till the 5th decade of life, after which this pattern had reversed. The authors attributed this to menopause and obesity among women. This study confirmed the findings of Jajoo (1993), with regards to higher prevalence among higher socioeconomic strata

Hypertension also emerges as a major factor along with diabetes and obesity as high risk factor for CHD and myocardial infarction (Yavagal, et.al., 1994). A Delhi based study among higher socio-economic strata families observed linkage between physical inactivity to both obesity and hypertension. The study found higher prevalence of hypertension among individuals not doing regular exercise. The study had a higher prevalence of women in the study, but the paper does not provide sex desegregated data. (Bhasin, et.al., 2001).

Diabetes

The number of persons suffering from diabetes is estimated to rise in the South East Asian region. The WHO (2000) report observes that unlike in developed countries where diabetes is more prevalent among older people, in countries of this region diabetes is prevalent among young economically active people. Further, for the world as a whole, there are more women than men with diabetes, however, in countries of this region, an equal proportion of men and women are affected.

A community based study (Ramankutty et al, undated) to assess the prevalence of non-insulin dependent diabetes mellitus, in Kerala, observed an overall prevalence rate of 16.3%. However, gender differences in the prevalence rates are found to be negligible. It is observed that greater prevalence is associated with advancing age, body mass index, sedentary habits, serum total cholesterol, hypertension and smoking. Age remains the only predominant social variable of consequence in hospital studies. The diabetes studies have tried to look at risk or vulnerability of diabetics to other health conditions such as incidence of urinary tract infections, osteoporosis, and ischaemic heart disease. Most of these studies are exploratory based in hospital settings to associate two health conditions.

Osteoporosis

Deteriorating health is a frequent, though not an inevitable, part of the ageing process for both sexes and women make up the majority of elderly people in the world. Moreover, the ageing process itself is a highly gendered one and the experience differs for women and men in a number of ways. Older women are biologically more susceptible than men to certain disabling diseases including rheumatoid arthritis, osteoporosis and Alzheimer's disease. Because of inequalities in income and wealth in earlier life, older women are also likely to have fewer material resources at their disposal and are less likely than men to receive assistance from relatives and friends (WHO, 1996). Studies in India indicate a higher incidence of osteoporosis in Indian population followed by Japan in the world. The average age for osteoporosis related fractures is observed to be 49 years for males and 57 years for females. Incidence of hip fractures was observed to be higher among males compared to females. The authors suspect that there might be a sex bias in the prevalence rate, since most of the fractures do not require hospitalization, women are less likely to gain access to hospital care (Gupta, 1996). This is an area that requires lot more exploration.

Cancers

The WHO (2000) report states that breast cancer is the most common cancer affecting women from developed countries and cervical cancer is the most common cancer affecting women from developing countries. Risk factors include poor sexual health, early age at marriage, high number of deliveries, sexually transmitted diseases and multiple sex partners. All these factors are closely associated to the status of women in the society.

The cancer studies reviewed here, mainly looked at incidence of disease and identified leading sites, while one study looked at risks prevalent by age and sex, religion, marital status. Focussing on age or religion indicates life styles to be associated with incidence. Studies that examined deaths due to cancers observed that the leading sites of cancer causing death are lung followed by oesophagus for males and for females it is breast followed by cancer of the cervix. The cancer studies show that prevalence was greater in males compared to females.

The cancer studies reviewed here, could be broadly classified as 1) studies that attempt to examine the social factors that correlate with different cancers and 2) clinical studies that are carried out strictly to assess the efficacy of clinical and diagnostic procedures case management. (Francisco C., et al. 1994; Sarkar, R. 1996; Francisco, C, 1995; Mankad, et. al, 1995)

Studies observe a:

- Significant correlation between increasing age of women and a spectrum of abnormalities that precede cervical cancer and severity of dysplasia (Dwivedi, et. al.. 1991)
- Women with duration of married life above 20 years were detected to have carcinoma and severe dysplasia of the cervix.
- Cancer cases were found to be proportionally more in women with 4 and more children. i.e dysplasias of all grades showed more prevalence among women of high parity group. (Dwivedi et.al., 1991; Gawande et. al, 1997). On the other hand, nullipara women (no children) showed the maximum normal cytology.
- Severe dysplasias were observed more with longer duration of contraceptive use (IUCDs and pills). However the long duration refers to 55 to over 61 months of IUCD use. The number of cases in point however, is only 4 out of sample 171 users (Desai, et. al, 1994).

A retrospective study of various cancers in Gwalior city concluded that unhygienic living conditions, multiparity and early marriage seem to be responsible for high incidence of cervical cancer for women and smoking, alcohol, tobacco chewing are responsible for oral and laryngeal cancer for men (Saksena and Bhargava, 1990). Male risk factors that contribute to cancer among women are a subject of enquiry. Sexual behaviour among males was observed by Agarwal, et. al (1993) and Arora, et. al (1996) to contribute to cervical carcinogenesis among woman who had one life time sexual partner. Poor genital hygiene, multiple sex partners, lack of condoms use by male partners places women in risk. The studies simplistically recommend educating of males to maintain genital hygiene, avoid multiple sex partners and improving condom use.

Breast cancer accounts for 20% of all female cancers in India. Due to lack of awareness and education, most women present themselves to the medical system with advanced disease. A hospital based prospective study by Goel, et. al (1995) of 100 women, observed that the time of first contact from the time of feeling a lump ranged from 1 day to 9.5 years (mean 6.7 years). Only 20 women were aware of breast cancer. These were educated urban women with a family history of malignancies. The mean time from feeling a lump to their first visit to a doctor was 1.7 months for women who were aware, to women who are unaware. The study also noted inappropriate medical practices leading to delay in referral and poor diagnosis. The question that seems to have escaped the enquiry - is lack of knowledge the only factor for not seeking care? What about issues like- fear, lack of permission, diagnostic facilities, resources including support structures?

A population based survival study of cases of female breast cancers registered with the Madras Metropolitan Tumor registry, showed significant differences in survival on the basis of age at diagnosis,

marital status, educational level and clinical extent of disease.

- Decreased survival was associated with higher age at diagnosis
- Single women displayed poorer survival compared married women.
- Survival rate higher among women with more than 12 years of schooling
- An inverse relationship was seen between survival rates and clinical extent of disease (Gajalakshmi, et. al, 1997).

This study provides a number of pointers to gender issues in survival, which require further exploration.

A study by Desai, et. al (1994) that examined the cytopathology of uterine cervix in 621 women users of intra uterine contraceptive devices (IUCD), concluded that changes in the cervical cytopathology in IUCD users is usually a result of infection and irritation and not to the use IUCD. 30% (190 women) had no complaints. Among the remaining women, leucorrhea, menstrual irregularity and pain in lower abdomen due to pelvic inflammatory disease and uterus prolapse were major complaints. The researchers actually remark: "These changes are never serious to warrant a removal of the IUCD" (p.269).

A paper by Bhalla et. al (1990) which examined the hospital statistics retrospectively, announced that breast cancer is emerging ahead of cervix cancer in Punjab. While acknowledging the limitation of extrapolating from hospital based data, the researchers suggest that increase in age at marriage and life expectancy for women could be the contributing factors, that require to be studied. It is amazing how improvements in women's status are assumed to create morbidity, for instance contribute to breast cancer! In a not so recent study that examined Bombay Cancer Registry for Cancers among Parsis and Sindhis men and women observed low risk of cervical and high risk of breast cancer in Parsi and Sindi women (Jassawalla, et al., 1980). This authors attribute is due to "the higher values of the average age at marriage, at first and last pregnancy and lower values for the total number of pregnancies (p.87). The choice for women seems to be between cervical cancer if you are poor and breast cancer if you are better off!

Mental Health

Social factors like domestic responsibilities, familial pressures, domestic violence, infertility, sexual abuse and harassment, poverty, lack of social support and social tensions (like, communal riots) have serious impacts on women's mental health. Globally, women suffer more from anxiety disorders and depression. A review of some of the studies on women and mental health in India has been reviewed here.

A study (MD dissertation, 1998) on the prevalence and psychosocial aspects of primary infertility in a rural community in Tamil Nadu, observed that the prevalence rate is 2.4%. The prevalence of psychiatric morbidity among infertile women is 45% as opposed to 15% among fertile women. Psychiatric morbidity was found to be greater among women married for less than 10 years, among women from low socioeconomic strata and women who have non-consanguineous marriages. Most of them experienced stigma and domestic unrest. One of the studies (Jamkhedkar, 1993) looks at attempted suicide, as one among a series of alternative coping strategies. Studies as these that look at sensitive yet neglected aspects also attempt to look at the family responses and the situational context in which suicidal attempts occur. Methodologically, the studies on mental illnesses do rely on psychometric tests but do also support data collection through qualitative methods. Another study (SCARF, 1998) showed that family members were not sensitive to women's mental illness and tolerated it less, putting pressure on

her to perform all familial roles. Marriage was seen as a solution, while the stigma of divorce was felt more than the trauma of mental illness. Among studies that looked at gender differentials, in one study (Kishwar et al, 1993) on hysteria, women who had hysteria suffered greater negative experiences than men who suffered from hysteria. Here too, marriage and family support structures were beneficial to men than women who suffered from the illness. Amongst men and women who suffered first break schizophrenia in another study (Thara et al, 1995), the only difference that was significant was that in terms of symptomatology, men displayed more of 'nuclear syndrome' than women (78% to 56%). A recent study of 660 urban women from low-income communities demonstrated the association of women's experience of gynaecological morbidity and its association with common mental disorders (Jaswal & Harpham, 2000). 17.9% of the women in the study reported common mental disorders. 50.6% of the women reported gynaecological morbidity (i.e pressure of atleast one gynaecological morbidity). Further 27.5% of these women also reported common mental disorders. Women reported that the presence of gynaecological symptoms affected their physical health (weakness, fatigue, body pain), changed their self-worth and personal dignity (inability to perform tasks and feeling of being 'dirty') and effected their social mobility (inability to participate in ceremonies). Studies on mental health drive home the need to alleviate women's social status, provide support structures, eliminate violence to improve their physical and mental well being.

III. EPISTEMOLOGICAL ISSUES

Feminist critique of scientific research draws attention to the perspective, content and craft of research which inherently have biases (Harding, 1987). Some of the issues in research that reflect the biases are: value-laden assumptions, higher value conferred to quantitative methods with a lower value attached to qualitative data, lack of involvement of the researcher with the subject of the research, an impersonal and detached process of research, including a presumed 'objectivity' of the researcher and the process of research.

The research work that has been reviewed here with a few exceptions seems to fall into a classic pattern of expertise and discipline- boundary maintenance. The studies, whether hospital based or community based, viz., typically examine the disease in isolation of the social context. The studies attempt to broadly:

- (1) Ascertain overall prevalence rates; male-female prevalence rates; prevalence rate by risk factors.
- (2) Ascertain prevalence rates by varying the measuring tools (clinical vs questionnaire/ laboratory test vs perceived morbidity) to assess the sensitivity of the tool; and
- (3) Examine the pathological progress and pathogeny of the disease before or after a medical intervention, in order to improve case management.

In a majority of the above types of research, the disease is strictly viewed as a clinical syndrome. Therefore, the social construction of illness/ disease by people, which contributes to the perception, the attitudes to the disease and further the health seeking behaviour, is totally undermined. In short, society is epistemologically eliminated as an element in the etiology of disease (Renaud, M., 1978, cited in Jones and Moon, 1987). Even when social differences are researched, explanation is often couched in terms of individual risk factors and life styles, and the causal chain is not extended back into society. As a result, this entire

body of research does not threaten the current social and economic order, since the onus of the health problem lies in the individual and not in the social matrix. Habermas (1970) has argued that by defining an ever-growing number of problems as amenable to positivist scientific intervention, social issues are removed from critical scrutiny and depoliticised (cited in Jones & Moon, 1987).

The studies on communicable diseases on the other hand, have attempted to understand the social dynamics, power relations between men and women, decline in women's status and so on, albeit in a limited manner.

The sections below present the issues that highlight the shortcomings of research that lack a coherent social and gender perspective, at each stage of the research process.

Assumptions

The assumptions and generalisations indicate the class bias of the researchers. For example, a study by Gopinath et.al., (1995), observed higher prevalence of heart disease among certain ethnic/religious communities. The researchers generalise to comment upon their life style or genetic predisposition and 'racial' risk factors. Such a trend towards 'social analysis' is disturbing. Terms like 'poor', 'illiterate', 'slum women' are liberally used as descriptors of the study participants, in most of studies.

Women as a simple 'category' or statistical variable referred to as 'females' appear in the studies. Sex disaggregation of data analysis and discussion of findings is extremely limited to reporting the direction of association of variables and their statistical significance. Prevalence rates are given by sex occasionally, thereafter, only statistically significant variables and outcomes are reported. Explanations pertaining to processes and mechanisms that shape and structure these relationships are seriously found missing.

Individuals are classified into aggregates on the basis of attributes such as income, occupation, lifestyle, type of physical activity, caste, religion, etc., in the hope of revealing common properties of diseased as compared to the non-diseased. These groups are 'taxonomic collectives' (Harve, 1979 cited in Jones & Moon, 1987). They share similar attributes but they may not actually interact or have functioning connections.

Socio-economic information, such as education, income, housing, type of occupation, assets, landholdings and the possession of consumer durables are collected to stratify the sample as high, medium and low socio-economic status (SES). Similarly, physical activity, involved in various occupations, is classified as mild, medium, and sedentary. A lot of subjectivity and value judgements seem to operate in arriving at these classifications. Hence, women who perform a number of tasks domestic and income earning often are lumped into the sedentary category.

Locale of study

Majority of the studies are hospital based. Hence, the sample is self selected and biased. The studies attempt to basically capture the occurrence of predetermined causes for a health outcome or specific medical intervention and outcome, e.g. hypertension, CHD, cancer etc. Controls are used so as to confirm factors associated with onset of disease, for improving clinical diagnosis and hence prevention or management of disease. 25 to 100 'patients' are studied and mostly clinical and biochemical evaluations/ assessments of manifestation of disease are used. These evaluations are done on cases as they present themselves, and on controls that are chosen at random to seek comparisons.

A preponderance of men in the hospitals and clinics is taken at face value to define many diseases as "male diseases". Community based studies confound and contradict hospital based statistics.

Recommendations

Recommendations that are given at the end of most studies seem to have a typical pattern. Studies on communicable diseases lay a great stress on pathogenesis of the disease, screening and targeted control for prevention. As opposed to this, studies on non-fatal communicable diseases such as leprosy and filariasis, dwell on the social dimensions of the disease. In the case of non-communicable diseases, where series of studies indicate life style related issues like smoking, drinking, stress, overweight, etc., as risk factors, the authors do not recommend changes in life style or the amelioration of the social conditions, but suggest better diagnostic methods and therapeutic control. Therefore, the conclusions and recommendations tend to remain general and mechanistic. Studies that have a large proportion of the respondents belonging to the lower socio-economic strata, recommend typically 'improve education', 'increase awareness' and so on. Individual and behavioural changes are recommended which only require health education, while structural conditions and systemic changes are never addressed. The entire range of determinants is not considered in suggesting preventive measures. For instance, even though (as in the case of the malaria studies) there is mention of descriptors of poverty, they do not count in preventive measures.

Analysis of ethical issues

In the conduct of research, numerous ethical considerations are found wanting. In order to study specific outcomes, there is random sample selection from particular referral centres. Drug management being altered according to needs of the study is an important issue to note in hospital-based studies. For instance, the application of chemotherapy to pregnant women affected by malaria. The assumption is that 'risk of disease far outweighs the harmful effects of drugs' (Jose et al, 1995). In other instances, the hospital surrounding and the numerous tests the patients are subject to, are considered unrelated to outcome of pregnancies such as intra-uterine death or spontaneous abortion.

CONCLUSIONS

Applying of the gender analysis framework to research demonstrated that the existing research studies, barring a few, did not inform enough about the following:

- Where male-female differentials existed, what were the contributing factors (e.g., genetic factors, issues of under reporting, etc.)?
- Do women have a biological advantage?
- Are tools of disease detection, leading to evidence of lesser prevalence data for women?
- Are there variations in the rates depending upon the source of data gathering?

The review has indicated that a gender analysis needs to inform a majority of studies with a clinical and bio-medical paradigm. There were a few exceptions among communicable diseases that touched upon socio-economic differentials. Among hospital based studies on communicable diseases, there are references to the social determinants and nutritional deficiencies, as in malaria studies of pregnant women. But the recommendations revert to suggesting targeted control as preventive measures. Some

WH-105
07627

of the studies on stigmatizing diseases such as leprosy and filariasis do reveal the gendered impact on the fallout of the disease and treatment. The socio-economic attributes are listed and clubbed together as SES groups, which do not bring out the interactions and variations among these variables within the high, low or middle groups.

Studies in non-communicable diseases especially heart diseases; hypertension, diabetes and cancers attempt to also identify risk factors, especially in the social realm. Most of the studies, barring the cancer studies, have identified life style related reasons/ class reasons such as smoking, sedentary life style, high fat food, and alcohol consumption apart from genetic/ biological predispositions to diseases. Sex differentials in prevalence have been observed. However, lack of uniform definitions, for example, of what would be considered 'sedentary', 'non-vegetarian food', etc., introduce a high element of medical researchers' bias towards social variables. The bias deepens even more when viewed from a gender perspective. Women respondents often referred to in the research studies as 'females' were assumed to be engaged in mild work leading to sedentary life styles. Even studies conducted in rural areas make such erroneous assumptions, oblivious to the enormous literature that has documented women's work across class and caste groups in urban and rural areas.

The studies on stigmatising diseases such as leprosy and filariasis have adopted a methodological framework that is relatively sensitive to gender and social dimensions. For instance the range of tools and the locale of investigation in the case of filariasis elicited gender differences. The analytical framework so adopted leads to suitable recommendations for diagnosis and prevention. It would be useful if studies on non-communicable and life-style related diseases and people's experience of illness too adopt a similar framework. The social etiology (causation) of diseases is more relevant for prevention and control, rather than a limiting bio-medical framework. The studies on non-communicable diseases especially the cancer studies look at disease more as a pathological phenomenon that requires efficient diagnostic procedures. There is also a privileging of laboratory diagnostic techniques rather than clinical tools as in the case of heart diseases, thereby sidelining self-reporting of symptoms, people's perceptions of illness and a social construction of disease. Further, even though drugs are very essential in disease control, people's perceptions and experience too are important in management of disease and drugs.

The review and analysis of issues suggest that health personnel and researchers have tremendous responsibility as caregivers as it is in their purview that morbidity presents itself. The understanding of the social etiology of illness and suffering of women is useful in reducing a total medicalisation of health conditions. It is crucially important to not only introduce rigour to eliminate all the methodological and conceptual biases stated in the last section of the paper but also address the following questions, in order to enrich the understanding of health in a holistic context:

- How do class, caste, and gender variables intervene, interact, and contribute (as risk or protective factors) to illnesses and differences in prevalence rates?
- What are the intra-class variations in men's and women's morbidities?
- What are the inter-class variations in women's morbidities?
- What are the factors that influence women's experience of illness, perceptions of disease, and the social etiology of disease and access to health care?
- How do gender roles predispose men and women to morbidities differentially?

Sensitivity to gender and social dimensions would ensure that the nature of data generated would subsequently make a difference to policy formulations and interventions.

REFERENCES

Agarwal Shyam S, Sehgal Ashok, Sardana Sarita et al. (1993): Role of male behavior in cervical carcinogenesis among women with one lifetime sexual partner, **Cancer**, Vol 72, No.5, pp.1666-1669.

Arora Raksha, Eliamma, Reddy Rani et al. Case control study of male risk factors for cervical cancer in developing country, **Journal of Obstetrics and Gynaecology of India**, 1996, pp.766-769.

Bandhopadhyay Lalita, Lymphatic Filariasis and the Women of India, **Social Science and Medicine**, May 1996, Vol. 42(10), pp.1401-1410

Bhalla P, Singh Rituraj, Sharma RK et al. Is the incidence of cancer of the female breast on the rise in Punjab? **Indian Journal of Maternal and Child Health**, 1990; 1(3): pp 86-87.

Bhasin S.K, Chaturvedi S, Gupta P 7 Aggarwal O.P, Status Of Physical Exercise And Its Association With Obesity And Hypertension In Two Urban Assembly Constituencies of East Delhi, **Journal of Indian Medical Association**, Vol. 99, No.11, November, 2001, pp.631-633

Bhatia M.L, Prevalence of Coronary Heart Disease in India: A Contemporary View, **Indian Heart Journal**, 1995, Vol 47, pp. 339-342.

Bulliya G, Risk of Coronary Heart Disease in Women after Menopause, **Journal of Indian Medical Association**, September, 2001, Vol. 99, No.9

Chhabra M.K, Lal A, Sharma K.K, Status of Life style Modifications in Hypertension, **Journal of Indian Medical Association**, September 2001, Vol.99, No.9

Chodankar CM and Deodhar K.P, Malaria- Still a Master Killer? **Journal of Association of Physicians of India**, 1995 Vol. 403(4), pp.261-262.

Desai Pankaj, Desai Monali, Desai Malini et al. Cytopathology of uterine cervix in IUCD users, **Journal of Obstetrics and Gynaecology of India**, 1994, pp.267-270, Baroda, Gujarat.

Dwivedi S, Singh G, Singh N et al. Cytoepidemiological study of cervical dyskaryosis amongst women with cervical erosion, **Indian Journal of Maternal and Child Health**, 1991, pp.18-22.

Enas A Enas. Senthil Kumar A, Vijaya Juturu & Rajeev Gupta, Coronary Artery Disease in Women. **Indian Heart Journal**, 2001, 53: pp.282-292

Francisco C. Nadkarni Nisha S, Rebello Maria Jose. Ovarian Tumours in Goa: A clinicopathological study. **Journal of Obstetrics and Gynaecology of India**, 1994. pp. 408-412.

Fransico C. Nadkarni Nisha S and Rebello Maria Jose. The ovarian teratomas, **Journal of Obstetrics and Gynaecology of India**, 1995, pp. 773-776.

Gajalakshmi C K, Shanta V, Swaminathan et. al. A population - based survival study on female breast cancer in Madras, India. **British Journal of Cancer**, 1997, 771-775

Gawande Vaishali, Wahab SN, Zodpey SP et al. Parity as a risk factor for cancer cervix , **Indian Journal of Medical Sciences**, 1997, pp-147-150

Gilberts CAM et.al., Hypertension and determinants of blood pressure with special reference to socioeconomic status in a rural south Indian Community. **Journal of Epidemiology and Community Health**, 1994, Vol. 48, No.3, pp.258-261

Goel A.K, Seenu V, Shukla N.K et al. Breast Cancer presentation at a regional cancer centre, **National Medical Journal of India** 1995, Vol. 8(1): pp 6-9.

Gopal, Meena, Aspects of Women's Morbidity in India: An Annotated Bibliography of Selected Studies (1990-1999), Rural Women's Social Education Centre, Chengalpattu, Tamil Nadu, 2000 (copies can be obtained from the author)

Gopalan S., Shiva M, (Eds.) National Profile on Women, Health and Development: India. New Delhi: Voluntary Health Association of India & WHD/WHO, 2000.

Gopinath N, Chadha S.L, Jain P et al. An epidemiological study of Coronary Heart Disease in different Ethnic groups in Delhi Urban Population, **Journal of Association of Physicians of India**, 1995, Vol.43(1), pp.30-33.

Goyal B.K, Shah A.S & Advani S.S, Profile of Risk Factors in Coronary Heart Disease in India (A perspective ten years study of 5000 Patients), **Bombay Hospital Journal**, vol. 33, no.1, 1991, pp 11-16

Gupta A, Osteoporosis in India- the Nutritional Hypothesis. **The National Medical Journal of India**, 1996, Vol.9(6), pp 268-274.

Gupta Rajeev and Gupta V.P, Meta analysis of Coronary Heart Disease Prevalence in India, **Indian Heart Journal**, May-June 1996, pp 241-245.

Habermas, J. (1970) Towards a Rationalist of Society, Boston, Beacon cited in Jones & Moon, 1987.

Harding, S. 'Is there a feminist method? in Sandra Harding (ed.) Feminism and Methodology, Indiana University Press, 1987.

Jajoo U.N , Kalantri S.P,Gupta O.P et al. The Prevalence of Hypertension in Rural population around Sevagram. **Journal of Association of Physicians of India**, Vol. 41(7), 1993, pp.422-424.

Jamkhedkar Shilpa, **Suicide amongst women**, M.A. Project Report, Tata Institute of Social Sciences, Mumbai, 1993.

Jaswal, K.P, Surinder & Harpham, Trudy- Gynaecological Morbidity and Common Mental Disorders in low-income urban women in Mumbai. Chapter in a forthcoming publication Mental Health from a Gender Perspective, Bhargavi Davar (Ed); Sage Publication, New Delhi, 2000

Jones, Kelvyn & Moon, Graham: Health, Disease and Society -An Introduction to Medical Geography. Routledge & Kegan Pau, 1987.

Jussawalla D.J, Yeole B.A, Natekar M.V & Rajagopalan T.R: Differences in Site Patterns of Cancer in

Sindhi and Parsi Sub-groups and the General Population of Greater Bombay, **Indian Journal of Cancer**, 1980, vol. 17, 78-88.

Kishwar Ahmed Shirali and S.P Bharati, Hysteria in Hill women: Life stress and Personality, **Indian Journal of Clinical Psychology**, 1993, Vol. 20(2), pp. 93-102.

Maitra Nandita, Joshi Medha and Hazra, Maya. Maternal Manifestations of Malaria in Pregnancy- A review, **Journal of Maternal and Child Health**, 1993, Vol. 4(4), pp.98-101.

Mankad Meeta A, Desai Ava D, Dave Kalpana, S et al. Dysgerminoma: A review of 12 cases, **Journal of Obstetrics and Gynaecology of India** 1995, pp.114-118.

Misra Rajiv, Sharma S.P, Jina R et al. Female genital tract tuberculosis with special reference to sterility in Eastern U.P, **Journal of Obstetrics and Gynaecology of India**, 1996, pp 104-109.

Mukherji P.K, Mishra V.K, Nath J et al. A study of Endometrial Tuberculosis in hospitalised patients of Pulmonary Tuberculosis. **Indian Journal of Tuberculosis**, 1991 Oct., Vol. 38, No.4, pp. 197-199.

Murali Dhar. Leading Causes of Death and Leading sites of Cancer, Greater Mumbai, 1984, M.Phil Dissertation, International Institute of Population Sciences, Mumbai 1991.

Nair, D.M. George, A & Chacko K.T. Tuberculosis in Bombay: New Insights from Poor Urban Patients. **Health Policy and Planning**, 1997, Vol 12 (1): 77-85.

Nair Lathika S and Nair A.S. Effects of Malarial Infection on Pregnancy, **Indian Journal of Malariaiology**, Dec.1993, Vol. 30, pp. 207-214

Rajarathnam Jolly and Rájarathnam Abel. **A report of Elephantiasis cases in K.V. Kuppam block. RUHSA Department**, Christian Medical College, Vellore, 1993.

Ramankutty V, Balakrishnana K.G, Jayashree K and Thomas Jessy. Prevalence of coronary heart disease in the rural population of Thiruvananthapuram District, Kerala, India, **International Journal of Cardiology**, 1993, Vol.39, pp.59-70.

Ramankutty V, Joseph Aleyamma, Soman C.R. **High prevalence of type 2 diabetes in an urban settlement in Kerala, India(n.d.)**

Reddy P. R, Pandirajan T, Soundararaghavan S and Rajaram P. TB of the female genital tract: Review of 60 cases, **Journal of Obstetrics and Gynaecology of India**, 1994, pp. 248-252.

Rao S, Garole V, Walawalkar S et al. Gender differentials in the social impact of leprosy, **Leprosy Review**, 1996 Vol. 67(3), pp. 190-199.

Register No. 892, M.D Community Medicine, Christian Medical College, Vellore. **A study on the Prevalence and Psychosocial aspects of Primary infertility in a Rural Community in South India**, MD Dissertation, MGR Medical University, Chennai, March 1998.

Sarkar, Ranu. 'Ovarian neoplasms - A 14 years study', **Journal of Obstetrics and Gynaecology of India**, 1996, pp. 146-150

Saksena A.K, Bhargava P.P, Spectrum of Cancer in Gwalior City - 1982-86, **Indian Medical Gazette**, June, 1990, pp 172-175

Schizophrenia Research Foundation (SCARF), Chennai. Study of Mentally Ill/Disabled Women who have been Separated / Divorced, Published by **The National Commission for Women**, New Delhi, 1997-98.

Singh Neeru, Shukla MM, Srivastava R and Sharma VP. Prevalence of Malaria among Pregnant and non-pregnant women of District Jabalpur, Madhya Pradesh, **Indian Journal of Malariaiology**, March 1995, vol. 32(1), pp. 6-13.

Singh RB, Niaz MA, Thakur AS et al. Social class and coronary artery disease in a urban population of North India in the Indian lifestyle and heart study, **International Journal of Cardiology**, 1998, vol. 64(2), pp. 195-203.

Stein CE, Fall CHD, Kumaran K et al. Fetal growth and coronary heart disease in South India, **The Lancet**, 1996, Vol. 348, Nov. 9, pp. 1269-1273.

Thara R, Joseph Albert A. Gender difference in symptoms and course of Schizophrenia, **Indian Journal of Psychiatry**, 1995, vol. 37(3), pp. 124-128.

Tripathy S. N and Tripathy S. N. Genital Affection in Pulmonary Tuberculosis, **Indian Journal of Tuberculosis**, Oct. 1991, vol. 38, no. 4, pp. 191-196.

Vlassoff Carol, Khot Seemantinee and Rao Shoba. Double Jeopardy: Women and leprosy in India, **World Health Statistics Quarterly**, 1996, Vol. 49, No. 2.

Wander GS, Khurana SB, Gulati R et al, Epidemiology of Coronary Heart Disease in a Rural Punjab Population - Prevalence and Correlation with Various Risk Factor, **Indian Heart Journal**, 1994, vol. 46(6), pp. 319-323.

World Health Organization: The World Health Report 1997: Conquering suffering, enriching humanity. Geneva, WHO cited in WHO 2000.

World Health Organization. The World Health Report 1999: Making a difference. Geneva: WHO, 1999.

World Health Organization. Women of South-East Asia: A Health Profile. Regional Publications SEARO No. 34, 2000, New Delhi.

WHO : Gender and Health: A Technical Paper, www.who.ch

Yavagal S T, Rangaran R, Prabhavathi. Clinical Profile of Acute Myocardial Infarction in Women. **Journal of the Indian Medical Association**, 1994, Vol. 92(9), pp. 283-284.

UNDP/World Bank/ WHO-TDR, Drug Delivery Strategies for Lymphatic Filariasis Elimination in India, Report of a Multi-centric Study, 2001

Authors' Contact Information:

Meena Gopal
Research Centre for Women's Studies,
SNDT Women's University,
Juhu Campus, Mumbai - 400 049
Fax: 91-22-660 4001
Email: meenagopal@hotmail.com

Lakshmi Lingam
Women's Studies Unit
Tata Institute of Social Sciences
Deonar, Mumbai 400 088, India
Phone: 91-22-556 3290/91 Ext: 431
Fax: 91-22-556 2912
Email: lakshmil@tiss.edu
Website: www.tiss.edu



Creating Resources for Empowerment in Action (CREA)
2/14, Shantiniketan, Second Floor, New Delhi 110021, India
Phone: 91-11-687 4733 & 410 7983 Fax: 91-11-6883209
Email: crea@vsnl.net Website: www.creaworld.org